

What is claimed is:

1. A removable printhead assembly for a printer which prints onto a moving web, comprising:  
a full width stationary printhead located on a rail along which it slides for service and removal;
- 5 a number of replaceable ink reservoirs which supply the printhead with different inks;  
the printhead comprising a color printhead which is at least as wide as the web; and  
the printhead being supplied with the different inks through tubes which can be disconnected so the printhead may be removed.
- 10 2. The printhead assembly of claim 1, wherein:  
the printhead is secured to the rail by fasteners which allow the printhead to be removed when the fasteners are disengaged.
3. The printhead assembly of claim 1, wherein:
- 15 the inks are contained in individual reservoirs and a sensor in each reservoir monitors a level which may be displayed to a user of the printer.
4. The printhead assembly of claim 1, further comprising:  
an air supply which supplies a stream of air, through a supply tube, to a location near the printhead from
- 20 where the stream impinges onto the web to prevent it from adhering to the printhead.
5. The printhead assembly of claim 1, further comprising:  
a first coupling which disconnects the printhead from the ink reservoirs.
- 25 6. The printhead assembly of claim 1, wherein:  
the printhead assembly further comprises a capping device having a cap motor for sealing the printhead with a moveable cap when not in use in order to prevent contamination from entering the printheads.
7. The printhead assembly of claim 6, wherein:

the capping device further comprises a blotter, which moves into and out of position and which is used for absorbing ink fired from the printhead.

8. The printhead assembly of claim 1, further comprising:

5 one or more rail microadjusters for accurately adjusting a gap between the printhead and the media onto which it is printing.

9. The printhead assembly of claim 4, further comprising:

a second coupling with which the air supply can be disconnected from the printhead.

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10. The printhead assembly of claim 9, wherein:

the first coupling and the second coupling are formed together as a single unit.

11. The printhead assembly of claim 1, further comprising:

15 a pre-heater located beneath a path followed by the media;  
the pre-heater located below the media and before the printhead.

12. The printhead assembly of claim 1, further comprising:

a dryer in the same path as the printer the dryer adapted to dry the ink deposited by the printer.

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13. The printhead assembly of claim 12, wherein:

the dryer has a compartment located beneath an opening;

the opening being essentially in the path;

there being a source of heated air located above the opening, the source of heated air adapted to blow heated

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air into the opening.

14. The printhead assembly of claim 13, wherein:

the opening is coverable by a door; and

the door covers the opening and acts to support the web when the door is closed.

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15. The printhead assembly of claim 14, wherein:  
the door pivots to reveal the opening.

16. The printhead assembly of claim 15, wherein:

5 the door is operated by a motor that operates a spool;  
the spool winding and releasing a member which operates the door.

17. The printhead assembly of claim 14, wherein:

a preheater is located in the path and located before the opening.

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18. The printhead assembly of claim 11, wherein:

the preheater is in the same plane as the door.

19. The printhead assembly of claim 13, wherein:

15 the source of heated air comprises a blower which feeds a stream of air into a plenum.

20. The printhead assembly of claim 19, wherein:

a temperature sensor is located in the plenum.

20 21. A removable printhead assembly as claimed in claim 1 wherein the moving web is printed by the  
printhead at a rate exceeding 0.02 square meters per second (775 square feet per hour).

22. A removable printhead assembly as claimed in claim 1 wherein the moving web is printed by the  
printhead at a rate exceeding 0.1 square meters per second (3875 square feet per hour).

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23. A removable printhead assembly as claimed in claim 1 wherein the moving web is printed by the  
printhead at a rate exceeding 0.2 square meters per second (7750 square feet per hour).

24. A removable printhead assembly as claimed in claim 1 wherein the printhead has more than 7680  
30 nozzles.

25. A removable printhead assembly as claimed in claim 1 wherein the printhead has more than 20,000 nozzles.

5 26. A removable printhead assembly as claimed in claim 1 wherein the printhead has more than 100,000 nozzles.

27. A removable printhead assembly as claimed in claim 1 wherein the printhead has more than 250,000 nozzles.

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28. A removable printhead assembly as claimed in claim 1 wherein the printhead prints ink drops with a volume of less than 5 picoliters.

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29. A removable printhead assembly as claimed in claim 1 wherein the printhead prints ink drops with a volume of less than 3 picoliters.

30. A removable printhead assembly as claimed in claim 1 wherein the printhead prints ink drops with a volume of less than 1.5 picoliters.

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31. A removable printhead assembly as claimed in claim 1 wherein the printer is a self contained printer for producing rolls of wallpaper, the printer comprising:

a cabinet in which is located a media path which extends from a media cartridge loading area to a winding area;

a full width digital color printhead located in the media path;

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a processor which accepts operator inputs which are used to configure the printer for producing a particular roll; and

the winding area adapted to removably retain a core and wind onto it, wallpaper produced by the printer.

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32. A removable printhead assembly as claimed in claim 1 wherein the printer is adapted for use with a media cartridge, the media cartridge comprising:

a case in which a roll of blank media may be deployed;

the case having two halves, hinged together, an area between the two halves, when closed, defining a media supply slot; and

the case having internally and adjacent to the slot, a pair of rollers, at least one of the rollers being a driven

5 roller which is supported at each end, by the case, for rotation by an external motor.

33. A removable printhead assembly as claimed in claim 1 wherein the printer is adapted for producing rolls of wallpaper for being carried in a consumer tote, the tote comprising:

a disposable exterior in which is formed a main access flap and a pair of core access openings; and

10 the tote having an interior in which is located a disposable core which is aligned with the access openings.

34. A removable printhead assembly as claimed in claim 1 wherein the printer has a transverse cutter, the cutter comprising:

a chassis having end plates;

15 the end plates being separated to allow a web of media to pass between them;

the end plates supporting between them a cutting blade; and

the blade supported at each end to perform a cutting motion which begins on one side of the web and finishes on an opposite side of the web.

20 35. A removable printhead assembly as claimed in claim 1 wherein the printer has a slitting mechanism, the slitting mechanism comprising:

a chassis having end plates;

the end plates being separated by a transverse portion of the chassis to allow a web of media to pass between them;

25 one or more rotating slitting shafts extending between the end plates, each shaft having one or more slitters arranged along its length, each slitter having a cutting edge; and

the slitting mechanism selectively engageable to either enter or not enter a path followed by the web according to an input provided by an operator of the printer.

36. A removable printhead assembly as claimed in claim 1 wherein the printer has a dryer, the dryer comprising:

a compartment with a top opening for receiving a media web fed from the printer;

a source of heated air located above the top opening for blowing heated air into the opening to dry printing on the media web.

37. A removable printhead assembly as claimed in claim 1 wherein the printer is adapted to produce rolls of wallpaper, the printer comprising:

a cabinet in which is located a media path which extends from a media loading area to a winding area;

a printhead located in the media path;

a processor which accepts operator inputs from one or more input devices which are used to configure the printer for producing a particular roll; and

the winding area adapted to removably retain a core and wind onto it, wallpaper produced by the printer wherein,

the length and design of the roll are determined by the operator inputs.

38. A removable printhead assembly as claimed in claim 1 for use in a method of printing wallpaper onto a web of media, the method comprising the steps of:

utilizing an on-demand printer comprising a cabinet in which is located a media path which extends from a

media loading area to a winding area, there being a printhead located in the media path, a processor which accepts operator inputs from one or more input devices;

using one or more input devices which communicate with the processor to capture data from an operator regarding a specification for an operator's requirements;

using the processor to operatively control the printer according to the data; and

printing a single roll of wallpaper, on demand, according to a selected pattern.

39. A removable printhead assembly as claimed in claim 1 for use in a method of operating a wallpaper printing business, the method comprising the steps of:

utilizing an on-demand printer comprising a cabinet in which is located a media path which extends from a

media loading area to a printhead and from the printhead to a dispensing slot;

- using one or more printer input devices which communicate with a processor to capture data regarding one or more customer's requirements;
- the data comprising at least a customer selected pattern;
- printing a roll of wallpaper, onto a web of blank media, on demand, according to the selected pattern; and
- 5 charging a customer for the roll.

40. A removable printhead assembly as claimed in claim 1 for use in a method of operating a wallpaper printing franchise, the method comprising the steps of:
- providing to franchisees, an on-demand printer comprising a cabinet in which is located a media path which
  - 10 extends from a media loading area to a printhead and from the printhead to a dispensing slot;
  - the printer having one or more printer input devices which communicate with a processor to capture data regarding one or more customer requirements, the data comprising at least a customer selected pattern;
  - providing the franchisee with a collection of patterns in a digital storage medium that can be read by the printer;
  - 15 enabling the franchisee to print a roll of wallpaper, onto a web of blank media, on demand, according to the selected pattern; and
  - obtaining or attempting to obtain a fee from the franchisee.

41. A removable printhead assembly as claimed in claim 1 wherein the printer is adapted to produce rolls of
- 20 wallpaper, the printer comprising:
  - a frame in which is located a media path which extends from a media loading area to a winding area;
  - a printhead located across the media path;
  - one or more input devices for capturing operator instructions;
  - a processor which accepts operator inputs which are used to configure the printer for producing a particular
  - 25 roll; and
  - the winding area adapted to removably retain a core and wind onto it, wallpaper produced by the printer.

42. A removable printhead assembly as claimed in claim 1 for use in a method of printing wallpaper onto a web of media, the method comprising the steps of:

utilizing an on-demand printer comprising a cabinet in which is located a media path, there being a full width printhead located across the media path, there being a processor which accepts operator inputs from one or more input devices and which controls the printer;

using one or more input devices which communicate with the processor to capture data from an operator

5 regarding a specification;

running the printer according to the data;

printing a single roll of wallpaper, on demand, according to a selected pattern and configuration;

changing the pattern according to a new datum from an operator; and

then printing a new roll onto the same web.

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43. A removable printhead assembly as claimed in claim 1 for use in a method of drying a moving web of media in a printer such as a wallpaper printer, the method comprising the steps of:

loading the web in a path that traverses a compartment in a dryer within the printer, the compartment having an opening across the top;

15 allowing the moving web to descend into the compartment, as required; and

blowing heated air from above the opening.

44. A removable printhead assembly as claimed in claim 1 for use in a method of supplying a media web to a wallpaper printer, the method comprising the steps of:

20 opening a reusable case;

placing into the case a core onto which has been located a supply roll of blank wallpaper media;

supporting the core for rotation within the case;

leading a free edge of the roll between a pair of rollers and past an edge of the open case; then

with the rollers located within the case and on either side of the web, closing the case and loading it into a

25 printer.

45. A removable printhead assembly as claimed in claim 1, the assembly further comprising:

a full width printhead located across the path;

the printhead comprising a color printhead which is at least as wide as the web;



the printhead being supplied with a number of different inks which are remote from the printhead and which supply the printhead through tubes.

46. A removable printhead assembly as claimed in claim 1 wherein the printer is adapted to produce rolls of wallpaper, the printer comprising:

a housing in which is located a media path which extends from a blank media intake to a wallpaper exit slot;  
a multi-color roll width removable printhead located in the housing and across the media path;

the printhead being supplied by separate ink reservoirs, the reservoirs connected to the printhead by an ink supply harness, there being a disconnect coupling between the reservoirs and the printhead;

one or more input devices for capturing operator instructions;

a processor which accepts operator inputs which are used to configure the printer for producing a particular roll.

47. A removable printhead assembly as claimed in claim 1 wherein the printer is adapted to produce rolls of wallpaper that can be carried in a consumer tote, the tote comprising:

a disposable exterior in which is formed a main access flap and a pair of core access openings;

the tote having an interior in which is located a disposable core which is aligned with the access openings;

both openings exposing a moulded coupling, one coupling attached to each end of the core, at least one of the couplings being a driven coupling and adapted to engage a driving spindle that rotates the core.

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48. A removable printhead assembly as claimed in claim 1 wherein the printer is self threading and adapted to produce rolls of wallpaper, comprising:

a media loading area adapted to support a media cartridge in a position so that a media supply slot of the cartridge is closely adjacent to a pilot guide;

a cabinet housing a media path which extends from the pilot guide to a printed media dispensing slot;

a printhead located across the media path;

a processor which accepts operator inputs which are used to configure the printer for producing a particular roll;

a motor within the cabinet for advancing a media web out of the media cartridge; and

one or more other motors adapted to urge the media along the path and out of the slot.

49. A removable printhead assembly as claimed in claim 1 adapted for use in a method of producing wallpaper on-demand, the method comprising the steps of:

utilizing an on-demand printer comprising a cabinet in which is located a media path which passes a printhead

5 on the way to a dispensing slot;

selecting a pattern and a configuration;

using one or more printer input devices which communicate with a processor to input the pattern and the configuration; and

printing a roll of wallpaper, onto a web of blank media, on demand, according to the selected pattern and

10 configuration.